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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/053,006	03/31/1998	MOHAMMAD ABDALLAH	42390.P4918	9764

7590 06/07/2005

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EXAMINER

SANTIAGO, ENRIQUE L

ART UNIT PAPER NUMBER

2671

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/053,006	Applicant(s) ABDALLAH ET AL.	
	Examiner Lance W. Sealey	Art Unit 2671	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-23 is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-9 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 3 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20040426</u> ✓ | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Allowed and Allowable Subject Matter***

1. Claims 3 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. No prior art anticipates or suggests a computer system comprising a storage device which further comprises a packing device for packing floating point data into the data elements.
2. Claims 15-23 are allowed because no single prior art, or reasonably combinable combination of prior art, anticipates or suggests altering the data using three-dimensional geometry to generate a second three-dimensional image by accessing a first data operand having a data element, accessing a second packed data operand having at least two data elements, inserting the data element in the first data operand into a destination field of a destination register, and displaying the second three-dimensional image.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1, 4-5, 8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable by Sidwell et al. ("Sidwell," U.S. Pat. No. 6,145,077) in view of the IBM ESA/390 processor as disclosed in the ESA/390 Principles of Operation ("ESA/390").
5. Sidwell, in disclosing an interleaved frame-buffer memory architecture, also discloses, with respect to claims 1, 4-5 and 12,

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- a hardware unit to transmit data representing graphics to another computer or a display (col.15, ll.53-58; transmission to a display in video and graphics at least obvious);
  - a processor coupled to the hardware unit (col.4, ll.10-13); and
  - a storage device coupled to the processor (memory 22, FIG.1).
6. Sidwell does not disclose a routine at least causing the processor to, at least, access a first data operand having a data element, access a second packed data operand having at least two data elements and insert the data element in the first data operand into a destination field of a destination register access a first data operand having a data element. These elements are disclosed by ESA/390.
- Accessing a first data operand having a data element is disclosed by the Zero and Add Packed instruction (the D2(L2,B2) operand in the diagram in section 8.3.9),
  - accessing a second packed data operand having at least two data elements is disclosed by the Zero and Add Packed instruction (the D1(L1,B1) operand in the diagram in section 8.3.9); and
  - insert the data element in the first data operand into a destination field of a destination register (the contents of the first operand are copied into the storage location designated by the address in register B1 plus the displacement D1; see section 5.1.1).
7. Therefore, it would have been obvious to a person skilled in the art at the time this invention was made to incorporate the ESA/390 Zero and Add Packed instruction in the Sidwell computer system instruction set. This would allow a transfer of packed data from one storage location to another (ESA/390, section 8.3.9).
8. Concerning claims 7 and 14, Sidwell discloses the storage device further comprising a packing device for packing integer data into the data elements (packed arithmetic unit, FIG.2).
9. Claim 8 is the same as claim 1 except a method is disclosed. However, it is at least obvious that a computer system that discloses elements also discloses a method that discloses the same elements.
10. Accordingly, in view of the foregoing, claims 1, 4-5, 7-8, 11-12 and 14 are rejected under 35 U.S.C.

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103(a) as unpatentable by Sidwell in view of ESA/390.

11. Claims 2, 6, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable by Sidwell in view of ESA/390 and further in view of the Sun Microsystems Visual Instruction Set (VIS<sup>TM</sup>) User's Guide Version 1.1 ("VIS").

12. Neither Sidwell nor ESA/390 discloses, with respect to all four claims, the storage device further comprising a packing device for packing floating point data into the data elements. This element is disclosed by the VIS instruction set at section 4.6.1, p.54.

13. Therefore, it would have been obvious to a person skilled in the art at the time this invention was made to incorporate the VIS instruction set in the Sidwell-ESA computer system by including the UltraSPARC-I Floating Point/Graphics Unit (p.8) in the Sidwell-ESA processor (FIG.1). This would enable the calculation with larger numbers that are sometimes needed in computer graphics (VIS, 1.2 UltraSPARC-I, p.2).

14. Therefore, in view of the foregoing, claims 2, 6, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable by Sidwell in view of ESA/390 and further in view of VIS.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the Office should be directed to the examiner, Lance Sealey, whose telephone number is (571) 272-7649. He can be reached from 7:00 am-3:30 pm Monday-Friday EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (571) 272-7653.

**Any response to this action should be mailed to:**

MS Non Fee Amendment

Commissioner for Patents

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P.O. Box 1450

Alexandria, VA 22313-1450

**or faxed to:**

**(703) 872-9306**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA,  
Sixth Floor (Receptionist).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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